Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Connect America Fund	)	WC Docket No. 10-90
	)	
Developing a Unified Intercarrier Compensation Regime	)	CC Docket No 01-92
	)	

COMMENTS OF SPRINT CORPORATION

Sprint Corporation ("Sprint"), pursuant to the Public Notices released on Sept. 8, 2017, (DA 17-863) and Sept. 26, 2017, (DA 17-933), hereby respectfully submits its comments to refresh the record on intercarrier compensation reform. Sprint urges the Federal Communications Commission ("FCC" or "Commission") to speed the transition to bill-and-keep and complete the work it started over ten years ago to reform a broken and outdated intercarrier compensation system.

In 2011, after years of debate and the compilation of an exhaustive record, the Commission concluded that a system of bill-and-keep "will eliminate competitive distortions between wireline and wireless services; and best promotes our overall goals of modernizing our rules and facilitating the transition to IP."[1] Based on this conclusion, the Commission adopted long overdue, ground-breaking steps to begin the transition to bill-and-keep. Sprint continues to endorse the complete and expeditious implementation of the bill-and-keep system of compensation to replace all remaining access rate elements, and remains concerned that local exchange carriers will be reluctant (or even refuse) to

[1] *Connect America Fund et al., Report and Order and Further Notice of Proposed Rulemaking*, 26 FCC Rcd 17663 (2011), para. 34 ("*2011 ICC Transformation Order*").

enter into far more efficient IP interconnection arrangements as long as they are permitted to assess access charges.

In addition to fostering competition and promoting the transition to IP, a system of bill-and-keep has a salutary effect on a number of ancillary problems that continue to plague the industry, including traffic pumping (schemes designed to take advantage of excessively high access charges) and rural call completion issues (which purportedly have resulted from attempts by some carriers to avoid uneconomically high rural access charges). Moreover, the continued imposition of access charges diverts scarce resources and capital from competitive broadband network investment. Because the transition to bill-and-keep is incomplete, prompt Commission action in the areas highlighted in the instant proceeding is in the public interest.

Network edge

In its earlier filings on intercarrier compensation reform,[2] Sprint discussed at length the economic and technical benefits of having voice traffic use the same IP network infrastructure used to transport and interconnect IP data and video traffic. Most IP traffic today is exchanged at Internet exchange points (IXPs), and it is Sprint's experience that most U.S. Tier 1 ISP traffic is exchanged at a relatively small number of IXPs across the country. Every IP network already has established locations where it currently exchanges non-voice IP traffic, and – other than a desire to protect above-cost access revenue streams or to preserve a competitive advantage for an affiliated entity – there is no reason why voice traffic could or should not also be exchanged at those

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[2] *See, e.g.*, Sprint comments filed on Feb. 24, 2012, and reply comments filed on March 30, 2012, in WC Docket Nos. 10-90, 07-135, 05-337, and 03-109, and GN Docket No. 09-51, CC Docket Nos. 01-92 and 96-45. Sprint incorporates these filings by reference as part of the instant proceeding.

existing locations as the default. Existing networks should be able to handle the small and rapidly diminishing incremental load represented by voice traffic, and, insofar as Sprint is aware, no party has disputed that the incremental cost of adding voice to an existing IP network would be extremely low. On the basis of technical feasibility, available capacity, and cost, designating existing IXPs as the default point for the exchange of voice traffic is the rational decision.

Since the Commission last considered the network edge/point of interconnection issue five years ago, the most notable development has been the increase in IP voice traffic. Currently, about 90% of Sprint's outbound wireless voice traffic is CDMA over IP, and by year-end 2017, that percentage is expected to reach 95%. The two largest ILECs have each converted over half of their landline voice connections to IP: 56.4% of Verizon's landline voice connections are FiOS customers,[3] and 56.1% of AT&T's landline voice subscribers are U-verse customers.[4] Over the past few years, Verizon has indicated that both its wireline and wireless affiliates have entered into IP interconnection agreements with multiple other carriers.[5]

Thus, now more than ever, it makes no sense to continue to use the legacy PSTN network framework as the basis for interconnection rules for IP voice traffic. LATA-

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[3] According to its third quarter 2017 earnings presentation (Oct. 19, 2017, slide 7), Verizon had 6.95 million total retail residential voice connections, of which 3.92 million were FiOS digital voice residence connections); see http://www.verizon.com/about/investors/quarterly-reports/3q-2017-quarter-earnings-conference-call-webcast.

[4] In the third quarter of 2017, AT&T had 5.8 million U-verse voice connections ad 10.333 million total wired voice connections. See https://investors.att.com/~/media/Files/A/ATT-IR/financial-reports/quarterly-earnings/2017/3q-2017/form-8-k.pdf and https://investors.att.com/~/media/Files/A/ATT-IR/financial-reports/quarterly-earnings/2017/3q-2017/master_3q17.pdf.

[5] *See, e.g.*, http://www.fiercewireless.com/wireless/verizon-s-ip-voice-interconnction-deals-sprint-and-t-mobile-hint-at-volte-roaming.

based points of interconnection are increasingly irrelevant and indisputably inefficient in an IP world; a rational interconnection framework for the exchange of packetized voice traffic should mimic the framework used for the exchange of all other types of Internet traffic. The Commission should rule that the point of interconnection for the exchange of voice traffic should presumptively be located at the places where IP network operators currently exchange non-voice traffic so voice traffic can utilize the same IP facilities that non-voice traffic uses.

To implement this default rule efficiently, the Commission should make clear that each network operator is responsible for the costs of establishing connections from its network to the IP POI, including any TDM-IP media gateway conversions, ports on its network edge router, port charges on the carrier hotel switch, and any carrier hotel landlord fees for its collocated equipment, or IP transit costs associated with reaching the IP POI if it does not have its own facilities to the IP POI. In other words, bill-and-keep should be the default intercarrier compensation mechanism for the exchange of all voice traffic.

Tandem switching and transport

Although substantial progress has been made in transitioning terminating tandem switching and transport rates to bill-and-keep, there has been a glitch in this transition where terminating traffic traverses a tandem switch that the terminating carrier or its affiliates owns. In the most recent annual access filings, price cap carriers were allowed to limit assessment of the transitional tandem switching and transport rates only when the subtending end office was owned by an ILEC affiliate, but not where the end office was owned by the price cap LECs' wireless, CLEC, cable or other non-ILEC affiliates.[6]

In Sprint's view, this practice is a misapplication of Sections 51.907(g) and (h) of the Rules.[7] "Affiliate" is defined in Section 3 of the Telecommunications Act (47 U.S.C. §153(1)) as "a person that (directly or indirectly) owns or controls, is owned or controlled by, or is under common ownership or control with, another person. For the purposes of this paragraph, the term "own" means to own an equity interest (or the equivalent thereof) of more than 10 percent." This definition clearly does not limit affiliates to ILECs, and the Commission should immediately clarify that for purposes of Section 51.907, a price cap carrier must apply the transitional rates wherever the subtending end office is owned by any entity for which the 10% affiliate rule is met.[8]

The Commission has also asked what transition period should apply to move originating tandem switching and transport services to bill-and-keep, and whether some sort of revenue guarantee should be adopted to address revenue shortfalls.[9] All originating access charges should be eliminated, and wireline carriers should recover their costs of originating traffic from their end user retail service customers, just as CMRS carriers do. A very short transition period (no more than two years), with no guaranteed revenue replacement, should be sufficient.

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[6] *See* Public Notice DA 17-654, Protested Tariffs Transmittals, No Action Taken (allowing several price cap annual access tariffs to go into effect), released July 7, 2017.
[7] Sections 51.907(g) and (h) mandate application of the transitional rate ($.0007 as of July 1, 2017 and zero as of July 1, 2018) to "terminating traffic traversing a tandem switch that the terminating carrier or its affiliates owns."
[8] *See* Sprint comments filed in WC Docket No. 10-90 on May 4, 2017, opposing a petition for waiver filed by CenturyLink.
[9] *See* Sept. 8 Public Notice, pp. 2-3.

Much of the remaining originating access charges are paid by the LEC's IXC affiliates and are thus an internal corporate accounting exercise (money flows from one pocket to the other). It would be wholly inappropriate to externalize these intracompany transfers by shifting them to other carriers and to the customers of those other carriers. Local exchange carriers have had many years and more than adequate notice to prepare for the transition to the bill-and-keep system of compensation to replace all access rate elements.

As an increasing percentage of traffic is exchanged in IP format, the cost of handling such traffic should decline significantly, particularly if that traffic is exchanged at IXPs as discussed above. To the extent that intercarrier compensation rate elements are intended to compensate a carrier for the cost of providing the service to another carrier, bill-and-keep should be sufficient, and a revenue guarantee (which imposes a burden on parties other than the originating LEC, and can skew the competitive playing field) is unnecessary.

Transit charges

As the Commission explained in the *2011 ICC Transformation Order*, "transit is the functional equivalent of tandem switching and transport."[10] Transit is used for the exchange of non-access traffic, while tandem switching and transport is used for the exchange of access traffic. Although the Commission adopted bill-and-keep for tandem switching and transport, it "has not addressed whether transit services must be provided pursuant to section 251 of the Act…."[11]

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[10] *2011 ICC Transformation Order*, para. 1311.
[11] *Id.*

If the Commission adopts the competitively neutral network edge proposal recommended above – requiring as the default the exchange of voice traffic at regional points of interconnection where IP data and video traffic is already exchanged, with each carrier assuming responsibility for the cost of delivering traffic to and accepting traffic at those regional points of interconnection -- there would be no need to address transit rates (or, for that matter, tandem switching and transport) or incumbent LECs' obligation to provide transit service pursuant to section 251. This is a straightforward, competitively neutral solution that can and should be adopted immediately.

However, in the event that the Commission does not immediately adopt this regional POI solution, it should, at a minimum, mandate that incumbent local exchange carriers must provide transit service pursuant to section 251(c)(2), at TELRIC rates. A federal mandate would result in a uniform national approach and avoid the need for lengthy, costly, state-by-state proceedings.

While transit service is available under commercial agreements (and in the case of some incumbent LECs, only after protracted and highly contested proceedings), those agreements do not necessarily reflect competitive, cost-based rates. Indeed, transit rates have not declined materially over the past 5 years, as one might expect in a competitive market. Transit services may be obtained from non-ILEC carriers in a few select markets, but competitive alternatives are not universally available and what competitive alternatives are available are not sufficiently robust or widespread to exert pressure on incumbent carriers' rates on a national basis.

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If the indisputable benefits of bill-and-keep are to be realized, the Commission must mandate its application to all access rate elements. To further streamline intercarrier compensation arrangements and to achieve the benefits of IP technology, the Commission also should adopt a network edge definition that mandates the default exchange of voice traffic at regional points of interconnection, with each carrier assuming responsibility for the cost of delivering traffic to and accepting traffic at those regional points of interconnection.

Respectfully submitted,

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October 26, 2017